IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: **Yu, et al.**

Application Number: 09/589,288 Group Art Unit: 1646

Filed: June 8, 2000 Examiner: Prasad, S.

Title: **Methods of Treatment Using Antibodies to Neutrokine-alpha (as amended)** Atty. Docket No. PF343P3C5

CLEAN VERSION OF ENTIRE SET OF PENDING CLAIMS

85. (Once Amended) A method of treating an autoimmune system disease or disorder comprising administering to an individual, a therapeutically effective amount of an antagonistic antibody or portion thereof that specifically binds a protein consisting of an amino acid sequence of amino acid residues 134-285 of SEQ ID NO:2.

86. (New) The method of claim 85 wherein the antibody or portion thereof is a monoclonal antibody.

87. (New) The method of claim 85 wherein the antibody or portion thereof is a polyclonal antibody.

88. (New) The method of claim 85 wherein the antibody or portion thereof is a Fab fragment.

89. (New) The method of claim 85 wherein the antibody or portion thereof is labeled.

90. (New) The method of claim 89 wherein the label is selected from the group consisting of:

(a) an enzyme label;

(b) a radioisotope;

(c) a fluorescent label; and

(d) biotin.

91. (New) The method of claim 90 wherein the label is a radioisotope selected from the group consisting of:

(a) ^{125}I;

(b) ^{121}I;

(c) ^{131}I;

(d) ^{112}In; and

(e) ^{99m}Tc.

118. (Once Amended) A method of treating rheumatoid arthritis comprising administering to an individual, a therapeutically effective amount of an antagonistic antibody or portion thereof that specifically binds a protein consisting of the amino acid sequence of amino acid residues 134-285 of SEQ ID NO:2.

119. (New) The method of claim 118 wherein the antibody or portion thereof is a monoclonal antibody.

120. (New) The method of claim 118 wherein the antibody or portion thereof is a polyclonal antibody.

121. (New) The method of claim 118 wherein the antibody or portion thereof is a Fab fragment.

122. (New) The method of claim 118 wherein the antibody or portion thereof is labeled.

123. (New) The method of claim 122 wherein the label is selected from the group consisting of:

(a) an enzyme label;

(b) a radioisotope;

(c) a fluorescent label; and

(d) biotin.

125. (New) The method of claim 123 wherein the label is a radioisotope selected from the group consisting of:

(a) ^{125}I;

(b) ^{121}I;

(c) ^{131}I;

(d) ^{112}In; and

(e) ^{99m}Tc.

148. (Once Amended) A method of inhibiting leukocyte proliferation, differentiation or survival comprising administering to an individual, a therapeutically effective amount of an antagonistic antibody or portion thereof that specifically binds a protein consisting of an amino acid sequence selected from the group consisting of:

(a) the amino acid sequence of amino acid residues n to 285 of SEQ ID NO:2, where n is an integer in the range of 2-190;

(b) the amino acid sequence of amino acid residues 1 to m of SEQ ID NO:2, where m is an integer in the range of 274 to 284; and

(c) the amino acid sequence of amino acid residues n to m of SEQ ID NO:2, where n is an integer in the range of 2-190 and m is an integer in the range of 274-284.

149. (New) The method of claim 148 wherein the protein consists of amino acid sequence (a).

150. (New) The method of claim 148 wherein the protein consists of amino acid sequence (b).

151. (New) The method of claim 148 wherein the protein consists of amino acid sequence (c).

152. (New) The method of claim 148 wherein the antibody or portion thereof is a monoclonal antibody.

153. (New) The method of claim 148 wherein the antibody or portion thereof is a polyclonal antibody.

154. (New) The method of claim 148 wherein the antibody or portion thereof is a Fab fragment.

155. (New) The method of claim 148 wherein the antibody or portion thereof is labeled.

156. (New) The method of claim 155 wherein the label is selected from the group consisting of:

(a) an enzyme label;

(b) a radioisotope;

(c) a fluorescent label; and

(d) biotin.

157. (New) The method of claim 156 wherein the label is a radioisotope selected from the group consisting of:

(a) ^{125}I;

(b) ^{121}I;

(c) ^{131}I;

(d) ^{112}In; and

(e) ^{99m}Tc.

158. (Once Amended) A method of inhibiting leukocyte proliferation, differentiation, or survival comprising administering to an individual, a therapeutically effective amount of an antagonistic antibody or portion thereof that specifically binds a

protein consisting of an amino acid sequence of amino acid residues 134-285 of SEQ ID NO:2.

159. (New) The method of claim 158 wherein the antibody or portion thereof is a monoclonal antibody.

160. (New) The method of claim 158 wherein the antibody or portion thereof is a polyclonal antibody.

161. (New) The method of claim 158 wherein the antibody or portion thereof is a Fab fragment.

162. (New) The method of claim 158 wherein the antibody or portion thereof is labeled.

163. (New) The method of claim 162 wherein the label is selected from the group consisting of:

(a) an enzyme label;

(b) a radioisotope;

(c) a fluorescent label; and

(d) biotin.

164. (New) The method of claim 163 wherein the label is a radioisotope selected from the group consisting of:

(a) ^{125}I;

(b) ^{121}I;

(c) ^{131}I;

(d) ^{112}In; and

(e) ^{99m}Tc.

165. (New) The method of claim 85 wherein the autoimmune disease or disorder is systemic lupus erythematosus.

166. (New) A method of treating an autoimmune disease or disorder comprising administering to an individual, a therapeutically effective amount of an antagonistic antibody or portion thereof that specifically binds to an isolated recombinant Neutrokine-α protein purified from a cell culture wherein the cells in said cell culture comprise a polynucleotide encoding amino acids 1-285 of SEQ ID NO:2 operably associated with a regulatory sequence that controls gene expression.

167. (New) The method of claim 166 wherein the antibody or portion thereof is a monoclonal antibody.

168. (New) The method of claim 166 wherein the antibody or portion thereof is a polyclonal antibody.

169. (New) The method of claim 166 wherein the antibody or portion thereof is a Fab fragment.

170. (New) The method of claim 166 wherein the antibody or portion thereof is labeled.

171. (New) The method of claim 170 wherein the label is selected from the group consisting of:

(a) an enzyme label;

(b) a radioisotope;

(c) a fluorescent label; and

(d) biotin.

172. (New) The method of claim 171 wherein the label is a radioisotope selected from the group consisting of:

(a) ^{125}I;

(b) ^{121}I;

(c) ^{131}I;

(d) ^{112}In; and

(e) ^{99m}Tc.

173. (New) The method of claim 166 wherein the autoimmune disease or disorder is systemic lupus erythematosus.

174. (New) A method of treating rheumatoid arthritis comprising administering to an individual, a therapeutically effective amount of an antagonistic antibody or portion thereof that specifically binds to an isolated recombinant Neutrokine-α protein purified from a cell culture wherein the cells in said cell culture comprise a polynucleotide encoding amino acids 1-285 of SEQ ID NO:2 operably associated with a regulatory sequence that controls gene expression.

175. (New) The method of claim 174 wherein the antibody or portion thereof is a monoclonal antibody.

176. (New) The method of claim 174 wherein the antibody or portion thereof is a polyclonal antibody.

177. (New) The method of claim 174 wherein the antibody or portion thereof is a Fab fragment.

178. (New) The method of claim 174 wherein the antibody or portion thereof is labeled.

179. (New) The method of claim 178 wherein the label is selected from the group consisting of:

(a) an enzyme label;

(b) a radioisotope;

(c) a fluorescent label; and

(d) biotin.

180. (New) The method of claim 179 wherein the label is a radioisotope selected from the group consisting of:

(a) ^{125}I;

(b) ^{121}I;

(c) ^{131}I;

(d) ^{112}In; and

(e) ^{99m}Tc.

181. (New) The method of claim 148 wherein the leukocyte is a lymphocyte.

182. (New) The method of claim 158 wherein the leukocyte is a lymphocyte.